

Amendments to the Specification:

Please amend paragraph 0235 in application as published (page 69, line 34 to page 70, line 18 in the originally filed application) as follows:

[0235] In this case, it takes two seconds for the flow rate to reach 25 ml/min, i.e., for the velocity of the syringe plunger to reach 0.02 m/sec. The acceleration a (m/sec^2) of the syringe plunger is calculated by dv/dt to be 0,01 m/sec. Thereafter, the syringe plunger is in uniform motion, where no acceleration is generated. By changing the elapsed time required for the flow rate to reach a predetermined value, the acceleration of the syringe plunger can be maintained less than or equal to a certain value, where the syringe plunger is subsequently in uniform motion and no acceleration is generated. In the system, the relationship between the predetermined flow rate (ml/min) (m^3/min), and the acceleration a (m/sec^2) of the syringe plunger and the elapsed time t (sec) required for the flow rate to the predetermined value is represented by:

$$\text{Pre determined flow rate } (\text{ml/min}) (\text{m}^3/\text{min}) = S(\text{m}^2) \cdot 10^6 \cdot a \cdot t \cdot 60$$